ABSTRACT

The HIV-I envelope protein gpl20 is toxic to rodent and human neurons by indirect mechanisms requiring accessory glial cells. Chemokines are known to block gpl20 interactions with chemokine receptors on T cells, macrophages, and microglia, thereby preventing viral infection. Gpl20-induced neuronal killing in rat hippocampal cultures was partially or completely prevented by specific short peptides related to chemokines, specifically KEYFTS and LESYT. These peptides thus have use in the treatment of neurological degenerative diseases having symptoms associated with neuronal cell death.